

Appl. No. 10/005,210  
Reply to Office Action of June 5, 2003

### Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

### Listing of Claims

1. (currently amended) A method for tracking the a maximum power point of a solar panel, comprising:
  - (a) providing a pulsewidth modulated (PWM) DC/DC converter between the an output of said panel and a load, and
  - (b) introducing a perturbation into a switching parameter of said converter
  - (c) determining input characteristics of said converter;
  - (d) using said input characteristics to determine said maximum power point.
2. (currently amended) A method as claimed in claim 1 wherein said parameter is the a duty cycle of at least one switching device in the converter.
3. (currently amended) A method as claimed in claim 1 wherein said parameter is the a switching frequency of at least one switching device in the converter.
4. (currently amended) Apparatus for tracking the a maximum power point of a solar panel, comprising:
  - (a) a pulsewidth modulated (PWM) DC/DC converter between the an output of the solar panel and a load, and
  - (b) means for introducing a perturbation into a switching parameter of said converter
  - (c) means for determining input characteristics of said converter;
  - (d) means for determining said maximum power point from said input characteristics.

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5. (currently amended) Apparatus as claimed in claim 4 wherein said converter operates in switching mode and said perturbation means comprises means for introducing a perturbation into the a duty cycle of at least one switching device of said converter.
6. (currently amended) Apparatus as claimed in claim 4 wherein said converter operates in switching mode and said perturbation means comprises means for introducing a perturbation into the a switching frequency of at least one switching device of said converter.
7. (currently amended) Apparatus as claimed in claim 4 wherein said converter ~~is a~~ comprises one of the group consisting of a SEPIC or converter and a Cuk converter.
8. (new) A method as claimed in claim 2 wherein said input characteristics comprise a maximum variation in an input voltage and a voltage stress in said at least one switching device.
9. (new) A method as claimed in claim 3 wherein said input characteristics comprise a maximum variation in an input voltage and an average value of said input voltage in said at least one switching device.
10. (new) Apparatus as claimed in claim 5 wherein said input characteristics comprise a maximum variation in an input voltage and a voltage stress in said at least one switching device.
11. (new) Apparatus as claimed in claim 6 wherein said input characteristics comprise a maximum variation in an input voltage and an average value of said input voltage in said at least one switching device.